

REMARKS

Applicants wish to thank Examiner James A. Thompson for having granted the courtesy of a telephone interview on July 28 — based in part upon a draft amendment that was sent to him by FAX. Portions of the remarks below track a page of comments which accompanied that FAX.

Comments adapted from the July cover-FAX

The foregoing amendments insert basically three "new" limitations (and some crosscombinations):

- multielement printing array per colorant,
- incremental printing per colorant, and
- extremely large numbers (i. e., 30 or 300) of printing elements per array.

Claims 34, 35 and 36 (the inkjet printhead claims that Applicants attempted to add in their previous response) insert the original versions of claims 1, 9 and 25 — not the new versions discussed below. (As those three claims were not previously entered, they are treated here as "new" rather than "currently amended".)

Apparatus claim 1 now recites that there is a multielement printing array for each colorant, respectively. It is

therefore believed that the Examiner's earlier arguments about cooperating offset-litho units no longer apply. As this new posture does not require incremental printing, the limitation to "incremental" has been deleted from claim 1, and dependent claim 4 has been correspondingly refined.

Dependent claims 7 and 8, however, reinstate that limitation ("incremental") — so for those two claims the operative limitation is the combination of both incremental and multielement printing "per colorant".

Amended independent method claim 9, in a sense paralleling claim 1, now recites that printing is multielement with respect to each colorant. (There are other context differences between original claims 1 and 9.)

Dependent claims 12 through 14 (analogously to claims 7 and 8) reassert the combination of both incremental and multielement, but here based on claim 9.

Amended independent claim 25, likewise paralleling claims 1 and 9, now recites that the printing is multielement (not incremental) with respect to each colorant.

New claim 37 in a sense is opposite to claims 1, 9 and 25: claim 37 relies on incremental rather than on multielement printing, per colorant. Claim 37, however, is intended to be otherwise a clone of original claim 1.

New claims 38 through 40 are broader than the inkjet-printhead claims (34 through 36) — *i. e.*, they say that the number of printing elements is very large (e. g., 30 or 300) but do not specify inkjet printing. They would legitimately cover dot-matrix, hot-wax transfer, bubble-jet etc., as well as inkjet.

Further comments, at least partially new

The Examiner has suggested that the approach behind these three new claims might not work, in view of the well-known patent principle that "merely" adding more of what one already sees in the prior art (i. e., mere "replication") is not patentable. Applicants respectfully submit that the high courts have discarded all such former tests.

Chisum calls them "label" approaches to deciding which assemblages are patentable "combinations" and which are unpatentable "aggregations". The hoary pre-§103 "mere replication" test is only one of several formerly popular "negative rules of patentability" that are likewise now without authority.

The ultimate, requisite, and ONLY authoritative test for this issue of "aggregation" — as agreed by the Federal Circuit — is whether the invention satisfies the requirements of Section 103, namely that the invention:

- (a) considered as a whole
- (b) be obvious to
- (c) a person of ordinary skill
- (d) at the time the invention was made.

That last may be reworded to say "in view of the prior art".

Thus the question in the present case must be whether the cited offset-lithography art, with its relatively small number (e. g. four to perhaps eight, allowing for spot color, diluted colorants, etc.) of cylindrical printing stations, can render obvious the Applicants' claimed thirty or three hundred "printing elements". Nothing of record suggests what would lead an artisan of ordinary skill from the offset-litho refer-

ences to the claimed apparatus with thirty or more printing elements.

There is no motivation (in the prior offset-litho art) for such a huge change of scale. This absence of motivation must be considered together with the following pragmatic and philosophical differences.

Another way to look at this issue is that the "mere replication" principle is inapplicable here because the "merely" part of it breaks down:

- (1) pragmatically speaking, in an offset-litho machine it would make no sense whatsoever to have 300 print-cylinder stations (i. e. nearly two orders of magnitude more than usual) — or even 30; and
- (2) philosophically/theoretically speaking, when the quantity of old elements added is orders of magnitude greater than originally, the result is a strongly qualitative (not "merely" quantitative) change in behavior.

Enormous numbers are commonly tossed around easily, in our technological society, so we tend to forget how big an order of magnitude really is. (As fantastic examples: magnifying a 6-foot person by one order of magnitude produces a 6-story person who can't stand against gravity; and reducing the same person by an order of magnitude produces a 7-inch person who can easily leap ten times the person's own height.)

Applicants' point is simply that the usual patent principle about mere quantitative changes is not applicable where quantitative changes are at such a monumental scale. At such an enormous scale, such changes wholly recast the fundamental character of the prior-art technology.

Now considering the motivation issue together with both the "pragmatic" and "philosophical" points just made, the Ap-

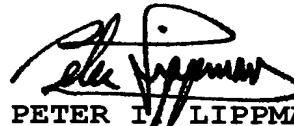
licants respectfully submit that the statutory unobviousness standard of patentability is very readily met by claims 38 through 40.

Applicants have also included narrower forms of these claims as new claims 41 and 42. It is believed that these claims are a *fortiori* unobvious and patentable.

Conclusion

In view of the foregoing amendments and remarks, Applicants respectfully request the Examiner's favorable reconsideration and allowance of all the claims now standing in this case. It is respectfully requested that, should there appear any further obstacle to allowance of the claims herein, the Examiner telephone the undersigned attorney to try to resolve the obstacle.

Respectfully submitted,



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